

MTBN1

MTAEPEVRTLREVVLDQLGTAESRAYKMWLPPLTPVPLNELIARDRRQPLRFALGIMDE  
PRRHLQDVGVGDVGAGGNIGIGGAPQTGKSTLLQTMVMSAAATHSPRNQFYCIDLGGG  
GLIYLENLPHVGGVANRSEPDVKNRVVAEMQAVMRQRETTFKEHRVGSIGMYRQLRDDPS  
QPVASDPYGDVFLLIDGWPGFVGEFPDLEGQVQDLAAQGLAFGVHVIISTPRWTELKSRV  
RDYLGTKEFRLGDVNETQIDRITREIPANRPGRAVSMEKHLMIGVPRFDGVHSADNLV  
EAITAGVTQIASQHTEQAPPVRVLPERIHLHELDPNPPGPESDYRTRWEIPIGLRETDLT  
PAHCHMHTNPHLLIFGAAKSGKTTIAHAIARAICARNSPQQRFMLADYRSGLLDAPDT  
HLLGAGAINRNSASLDEAVQALAVNLKKRLPPTDLTTAQLRSRSWWSGFDVLLVDDWHM  
IVGAAGGMPPMAPLAPLLPAAADIGLHIIVTCQMSQAYKATMDKFVGAAGSGAPTMFLS  
GEKQEFPSSFKVKRPPGQAFLVSPDGKEVIQAPYIEPPEEVFAAPPSAG\*

MTBN2

MEKMSHDPIAADIGTQVSDNALHGVTAGSTALTSGTAGVHVSQAGVFAE\*  
LLASNASAQDQLHRAVEAVQDVARTYSQIDDGAAGVFAE\*

MTBN3

MLWHAMPPELNTARLMAGAGPAPMLAAAAGWQTLSAALDAQAVELTARLNSLGEAWTG  
SDKALAAATPMVVWLQTA  
STTNPIFGMPSPGSSTPGQLPPAATQTLGQLGEMSGPMQQLTQPLQQVTSLSQVGGTG  
GNPADEEAAQMGLLGTPLSNHPLAGGSGPSAGAGLLRAESLPGAGGSLTRTPLMSQLI  
EKPVAPSVMAAAAGSSATGGAAPVGAGAMQGAQSGGSTRPGLVAPAPLAQEREEDDED  
DWDEEDDW\*

MTBN4

MAEMKTDAATLAQEAGNFERISGDLKTQIDQVESTAGSLQGQWRGAAGTAAQAAVVRFQE  
AANKQKQELDEISTNIRQAGVQYSRAEEQQALSSQMGF\*

MTBN5

MAADYDKLFRPHEGMEAPDDMAAQPF  
FVSAPP  
IAGPEPAPP  
HQPRRTAPAPP  
GKVATGPSIQARLRAEEASGAQL  
NSGRRAERRVHP  
KVKPQKP  
VVGLKG  
ELSHYND  
FFDPLTRGV  
PNVAVKDL  
ERAGRR\*

FDPSASFPP  
PPMPIAAGE  
PPEPAASK  
PPTPMP  
PQATQTL  
GQLGEMSG  
PMQQLTQPL  
QQVTSLSQ  
VGGTG  
PMQPSAP  
HVP  
HSRRARRGH  
YRTDTER  
RGP  
PAPTEPPP  
SPSPQR  
DQSLRPA  
AKGPKVK  
YELDLHAR  
VRRNPRGS  
YQIA  
LADPGAG  
NLADR  
VGRQSGAT  
IADV  
LAEK  
IADP  
ASRFY  
NLVLADC  
GAG  
MPWDR  
HIAAG  
TEISLD  
LLDPIY  
KRKVLE  
LAAAL  
SDDF

**FIG. 1A**

MTBN6

LSAPAVAAGPTAAGATAARPATTRVTILTGRRMTDLVLPAAVPMETYIDDTAVVLSEVLE  
DTPADVLGGFDFTAQGVWAFAARPGSPPLKLDQSLLDAGVVDGSLLTUVSRTERYRPLV  
EDVIDAIAVLDESPEFDRTALNRFVGAAIPLLTAAPVIGMAMRAWWETGRSLWWPLAIGIL  
GIAVLVGSFVANRFYQSGHHLAECLLVTTYLLIATAAALAVPLPRGVNSLGAPQVAGAATA  
VLFLTLMTRGGPRKRHELASFAVITAIAVIAAAAAFGYGYQDWVPAGGIAGLFIVTNAA  
KLTVAVARIALPPIPVPGETVDNEELDPVATPEATSEETPTWQAIIASVPASAVRLTER  
SKLAKQLLIGYVTSGTLILAAGAIAVVVRGHFFVHSLVVAGLITTVCGFRSRLYAERWCA  
WALLAATVAIPGTGLTAKLIIWPHYAWLLSVYLTVALVALVVVGSMAHVRRVSPVKRT  
LELIDGAMIAAIIPMLLWITGVYDTVRNIRF\*

MTBN7

MAEPLAVDPTGLSAAAALKLAGLVFPQPPAPIAVSGTDSVVAAINETMPSIESLVDGLPG  
VKAALTRTASNMMNAAADVYAKTDQSLGTSLSQYAFGSSGEGLAGVASVGGQPSQATQLLS  
TPVSQVTTQLGETAAELAPRVVATVPQLVQLAPHAVQMSQNAsPIAQTIQTAQQAAQSA  
QGGSGPMPAQLASAEKPATEQAEPVHEVTNDDQGDQGDVQPAEVVAAARDEGAGASPGQQ  
PGGGVPAQAMDTGAGARPAASPLAAPVDPSTPAPSTTTL\*

MTBN8

**FIG. 1B**

mtbn1

1 atgactgctg aaccggaagt acggacgctg cgcgagggtg tgcgtggacca  
51 gctcggcact gctgaatcgc gtgcgtacaa gatgtggctg cccgcgttgc  
101 ccaatccggc cccgctcaac gagctcatcg cccgtgatcg ggcacaaccc  
151 ctgcgatttg ccctggggat catggatgaa ccgcgcgcgc atctacaga  
201 tgtgtggggc gtagacgtt ccggggccgg cgcaacatc ggtattgggg  
251 gcgcacccca aaccgggaag tcgacgctac tgcaagacat ggtgatgtcg  
301 gccgcgcaca cacactcacc gcgcaacgtt cagttctatt gcatcgaccc  
351 aggtggcgcc gggctgatct atctcgaaaa ccttcacac gtcgggtggg  
401 tagccaatcg gtccgagccc gacaagggtca accgggttgt cgcaagatg  
451 caagccgtca tgccggcaacg ggaaaccacc ttcaaggaac accgagtggg  
501 ctcgatcgcc atgtaccggc agctgcgtga cgatccaatg caacccgttg  
551 cgtccgatcc atacggcgac gtctttctga tcacgcacgg atggcccggt  
601 tttgtcggcg agttccccga ccttgagggg caggttcaag atctggccgc  
651 ccaggggctg gcgttcggcg tccacgtcat catctccacg ccacgctgga  
701 cagagctgaa gtcgcgtgtt cgcgactacc tcggcaccaa gatcgagttc  
751 cgcttggtg acgtcaatga aaccaggatc gaccggatta cccgcgagat  
801 cccggcgaat cgtccgggtc gggcagtgtc gatggaaaag caccatctga  
851 tgatcggcgt gcccagggtt gacggcgtgc acagcgccga taacctgggt  
901 gaggcgatca ccgcgggggt gacgcagatc gcttcccacg acaccgaaca  
951 ggcacccctcg gtgcgggtcc tgccggagcg tatccacctg cacgaactcg  
1001 aaccgaaccc gccgggacca gagtccgact accgcactcg ctggagatt  
1051 ccgatcggtc tgccgcgagac ggacctgacg ccggctcaact gccacatgca  
1101 cacgaaccccg cacctactga tcttcgggtc ggccaaatcg ggcaagacga  
1151 ccattgcccc cgcgatcgcc cgccgcattt gtccccgaaa cagtccccag  
1201 caggtgcggc tcatgctcgc ggactaccgc tcgggcctgc tggacgcggc  
1251 gccggacacc catctgctgg ggcgcggcgc gatcaaccgc aacagcgctg  
1301 cgcttagacga ggcgttcaa gcactggcgg tcaacctgaa gaagcggttg  
1351 ccgcgcaccg acctgacgac ggcgcagata cgctcgccgtt cgtgggtggag  
1401 cgatattgac gtcgtgtttc tggtcgacga ttggcacatg atcgtgggtg  
1451 ccgcgggggg gatgccggcg atggcaccgc tggccccgtt attgcggcg  
1501 gccgcagata tcgggttgca catcattgtc acctgtcaga tgagccaggc  
1551 ttacaaggca accatggaca agttcgtcgg cgccgcattt gggtcgccgc  
1601 ctccgacaat gttcctttcg ggcgagaagc aggaattccc atccagttag  
1651 ttcaagggtca agcggcgccc ccctggccag gcatttctcg tctcgccaga  
1701 cggcaaagag gtcatccagg ccccctacat cgagcctcca gaagaagtgt  
1751 tcgcagcacc cccaaacgcgc gttaa

mtbn2

1 atggaaaaaaa tgtcacatga tccgatcgct gccgacattt gcaacgcgaaatg  
51 gagcgacaac gctctgcacg gctgtacggc cggctcgacg ggcgtacgt  
101 cggtaaccgg gctggttccc gggggggccg atgagggttc cgcggcaagcg  
151 gcgcacggcgt tcacatcgga gggcatccaa ttgtgtggatt ccaatgcac  
201 ggcggcaagac cagctccacc gtgcgggcga agcggtccag gacgtcgccc  
251 gcacctattt gcaaatcgac gacggcgccg ccggcgtttt cgccgaatag

**FIG. 2A**

mtbn3

1 atgctgtggc acgcaatgcc accggagcta aataccgcac ggctgatggc  
51 cggcgccgggt ccggctccaa tgcttgcggc ggccgcggga tggcagacgc  
101 ttcggcgcc tctggacgct caggccgtcg agttgaccgc gcgcctgaac  
151 tctctgggag aaggctggac tggaggtggc agcgacaagg cgcttgcggc  
201 tgcaaacgccc atggtggtct ggctacaaaac cgctgtcaaca caggccaaga  
251 cccgtgcgtat gcaggcgacg ggcgaagccg cgccatacac ccaggccatg  
301 gccacgacgc cgtcgctgcc ggagatcgcc gccaaccaca tcacccaggc  
351 cgtccttacg gccaccaact tcttcggtat caacacgatc ccgatcgctg  
401 tgaccgagat ggattatttc atccgtatgt ggaaccaggc agccctggca  
451 atggaggtct accaggccga gaccgcggg aacacgctt tcgagaagct  
501 cgagccgatg gcgtcgatcc ttgatccccg cgcgagccag agcacgacga  
551 acccgatctt cggaaatgccc tccccctggca gctcaacacc gtttggccag  
601 ttgccgccccg cggctaccca gaccctcgcc caactgggtg agatgagcgg  
651 cccgatgcag cagctgaccc agccgctgca gcaggtgacg tcgttgttca  
701 gccaggtggg cggcaccggc ggcggcaacc cagccgacga ggaagccgcf  
751 cagatgggcc tgcgtggcac cagtccgctg tcgaaccatc cgctggctgg  
801 tgatcagggc cccagcgcgg ggcggggcct gctgcgcgcg gagtcgtac  
851 ctggcgcagg tgggtcggtt acccgacgc cgctgtatgc tcagctgatc  
901 gaaaagccgg ttgccccctc ggtgatgccc gggctgctg ccggatcgatc  
951 ggcgacgggt ggcgcccgtc cggtgggtgc gggagcgatg gcccagggtg  
1001 cgcaatccgg cgctccacc aggccgggtc tggtcgcgcc ggacccgctc  
1051 ggcgaggagc gtgaagaaga cgacgaggac gactgggacg aagaggacga  
1101 ctggta

mtbn4

1 atggcagaga tgaagaccga tgccgctacc ctcgcgcagg aggcaggtaa  
51 tttcgagccg atctccggcg acctgaaaac ccagatcgac caggtggagt  
101 cgacggcagg ttcgttgcag ggcgcgtggc gggcgccggc ggggacggcc  
151 gcccaggccg cggtggtgcg cttccaagaa gcagccaata agcagaagca  
201 ggaactcgac gagatctcga cgaatattcg tcaggccggc gtccaaatact  
251 cgagggccga cgaggagcag cagcaggcgc tgtcctcgca aatgggcttc  
301 tga

mtbn5

1 atggcgcccg actacgacaa gctcttccgg ccgcacgaag gtatggaagc  
51 tccggacgtat atggcagcgc agccgttctt cgaccccaat gcttcgtttc  
101 cgccggcgcc cgcatcgca aacctaccga agcccaacgg ccagactccg  
151 cccccgacgt ccgacgaccc ttcgtgtcgg ccccgccggc  
201 gcccacccca cccccaccc cgcctccggc aactccgtatcg ccgatcgccg  
251 caggagagcc gcctcgccg gaaccggccg catctaaacc acccacaccc  
301 cccatgcca tcgcccggacc cgaaccggcc ccacccaaac caccacaccc  
351 ccccatgcccc atcgccggac cgcgacccggc ccacccaaa ccacccacac  
401 ctccgatgcc catcgccggaa cctgcaccca ccccaaccga atcccaatgg

**FIG. 2B**

451 gcgccccc gaccaccgac accacaaaacg ccaaccggag cgccgcagca  
 501 accggaatca ccggcgcccc acgtaccctc gcacgggcca catcaacccc  
 551 ggcgcaccgc accagcacccg ccctgggcaa agatgccaat cgcgaaaccc  
 601 ccgccccgtc cgtccagacc gtctgcgtcc ccggccgaac caccgaccgg  
 651 gcctgccccca caacactccc gacgtgcgcg ccgggggtcac cgctatcgca  
 701 cagacaccga acgaaacgtc gggaaaggtag caactggtcc atccatccag  
 751 ggcggctgc gggcagagga agcatccggc ggcagctcg ccccccggAAC  
 801 ggagccctcg ccagcgccgt tgggccaacc gagatcgat ctggctccgc  
 851 ccacccgccc cgccggacaca gaacctcccc ccagccctc gccgcagcgc  
 901 aactccggtc ggcgtgccga ggcacgcgtc caccggatt tagccgcccc  
 951 acatgcccgcg ggcacaccgtt attcaattac ggccgcaacc actggcggtc  
 1001 gtcgcccggaa gcgtgcagcg ccggatctcg acgcgacaca gaaatcctta  
 1051 aggccggcgcc ccaagggggcc gaaggtgaag aaggtgaagc cccagaaacc  
 1101 gaaggccacg aagccgcccc aagtgggtgtc gcagcgcggc tggcgcacatt  
 1151 ggtgcgtatgc gttgacgcga atcaacctgg gcctgtcacc cgacgagaag  
 1201 tacgagctgg acctgcacgc tcgagtcggc cgcaatcccc gcccggctgt  
 1251 tcagatcgcc gtcgtcggtc tcaaagggtgg ggctggcaaa accacgctga  
 1301 cagcagcggtt ggggtcgacg ttggctcagg tgccggccga ccggatcctg  
 1351 gctctagacg cgatccagg cgccggaaac ctcgccgatc gggtagggcg  
 1401 acaatcgggc ggcacccatcg ctgatgtgtc tgagaaaaaa gagctgtcgc  
 1451 actacaacga catccgcgcac cacactagcg tcaatgcgtt caatctggaa  
 1501 gtgctgcccgg caccggaaata cagctcgccg cagcgcgcgc tcagcgacgc  
 1551 cgactggcat ttcatcgccg atcctgcgtc gaggttttac aacctcgatct  
 1601 tggctgatttggggccggc ttcttcgacc cgctgaccccg cgccgtgctg  
 1651 tccacgggtt ccgggtgtcgt ggtcgtggca agtgtctcaa tcgacggcgc  
 1701 acaacaggcg tcggtcgttggactgggtt ggcacacaac ggttaccaag  
 1751 atttggcgag ccgcgcgtatgc gtggtcatca atcacatcat gccgggagaa  
 1801 cccaatgtcg cagttaaaga cctgggtcggtt catttcgaaac agcaagttca  
 1851 acccgccgg gtcgtggtca tgccgtggga caggcacatt gcccggggaa  
 1901 ccgagatttc actcgacttg ctcgacccta tctacaagcg caaggtcctc  
 1951 gaattggccgg cagcgctatc cgacgatttc gagagggctg gacgtcgatgg  
 2001 a

### mtbn6

1 ttgagcgac ctgctgttgc tgctggtcct accgcccggg gggcaaccgc  
 51 tgcgcggcct gccaccaccc ggggtgacgt cctgaccggc agacggatga  
 101 ccgattttgtt actgccagcg gccgggtccga tgaaaactta tattgacgac  
 151 accgtcgccgg tgctttccga ggtgttggaa gacacggccgg ctgatgtact  
 201 cggcggcttc gactttaccg cgcaaggcgt gtggcgttc gctcgcccg  
 251 gatcgccggcc gctgaaggtc gaccagtac tcgatgacgc cgggggtggc  
 301 gacgggtcac tgctgactct ggtgtcgtc agtcgcaccc agcgctaccg  
 351 accgttggtc gaggatgtca tcgacgcgtat cggcgtgtt gacgagtcac  
 401 ctgagttcga ccgcacggca ttgaatcgct ttgtggggc ggcgatcccg  
 451 cttttgaccg cggccgtcat cgggatggcg atgcgggcgt ggtggaaac  
 501 tggcgtagc ttgtgggtggc cgttggcgat tggcatcctg gggatcgctg

**FIG. 2C**

551 tgctggtagg cagttcgac gcgaaacaggt tctaccagag cgcccacctg  
 601 gccgagtgcc tactggtcac gacgtatctg ctgatcgcaa ccgcgcacgc  
 651 gctggccgtg ccgttgcgc gccccgtcaa ctcgttgggg gcgccacaag  
 701 ttgccggcgc cgctacggcc gtgtctttt tgaccttgat gacgcggggc  
 751 ggccctcgga agcgtcatga gttggcgtcg tttgccgtga tcaccgctat  
 801 cgcgtcatc gccccgcgc ctgccttcgg ctatggatac caggactggg  
 851 tccccgcggg gggatcgca ttccggctgt tcattgtgac gaatgcggcc  
 901 aagctgaccg tcgcggtcgc gccccgtcg ctgcgcgcga ttccggtaacc  
 951 cggcgaaacc gtggacaacg aggagttgtc cgatccgtc gcgaccccg  
 1001 agcttaccag cgaagaaacc ccgacctggc aggccatcat cgctcggtg  
 1051 cccgcgtccg cggtccggct caccgagcgc agcaaactgg ccaagcaact  
 1101 tctgatcgga tacgtcacgt cggcacccct gattctggct gccgggtcca  
 1151 tcgcggtcgt ggtgcgcggg cacttcttg tacacagcct ggtggtcgcg  
 1201 gtttcatca cgaccgtctg cgatttcgc tcgcggctt acgcccggcg  
 1251 ctgggtgtcg tggcggttcg tggcgccgac ggtcgcgatt ccgacgggtc  
 1301 tgacggccaa actcatcatc tggtacccgc actatgcctg gctgttgtg  
 1351 agcgttacc tcaacggtagc cctgggttcg ctcgtgggtt tcgggtcgat  
 1401 ggctcacgtc cggcgcggtt caccggctgt aaaacgaact ctggatttg  
 1451 tcgacggcgc catgatcgct gcatcatc ccatgctgt gtggatcacc  
 1501 ggggtgtacg acacggtccg caatatccgg ttctga

#### mtbn7

1 atggctgaac cggtggccgt cgatcccacc ggcttgagcg cagcggccgc  
 51 gaaattggcc ggctcggtt ttccgcagcc tccggcgccg atcgcggtca  
 101 gcggAACGGA ttccgggtta gcagcaatca acgagaccat gccaagcatc  
 151 gaatcgctgg tcagtgcacgg gctgccccgc gtggaaagccg ccctgactcg  
 201 aacagcatcc aacatgaacg cggcgccgga cgtctatgcg aagaccgatc  
 251 agtcaactggg aaccagttt agccagttatg cattcggttc gtcggcgaa  
 301 ggccctggctg gcgtcgccctc ggtcggttgt cagccaagtc aggctaccca  
 351 gctgctgagc acacccgtgt cacaggtcac gacccagctc ggcgagacgg  
 401 ccgctgagct ggccacccgt gtgttgtcga cggtgccgca actcggttcag  
 451 ctggctccgc acgcccgttca gatgtcgcaa aacgcatccc ccatcgctca  
 501 gacgatcaat caaacggccc aacaggccgc ccagagcgcg cagggcgca  
 551 gcggcccaat gcccgcacag cttgccagcg ctggaaaaacc ggccaccggag  
 601 caagcggagc cgtccacga agtgacaaaac gacgatcagg gcgaccaggg  
 651 cgacgtgcag ccggccgagg tcgttgcgc ggcacgtgac gaaggcgccg  
 701 ggcgcacccatc gggccagcag cccggcgggg gcgttccgc gcaagccatg  
 751 gataccggag ccgttgcggcc cccagcggcg agtccgctgg cggccccgt  
 801 cgatccgtcg actccggcac cctcaacaac cacaacgttg tag

## FIG. 2D

mtbn8

1 atgagtatta ccaggccgac gggcagctat gccagacaga tgctggatcc  
51 gggcggctgg gtggaagccg atgaagacac tttctatgac cgggcccagg  
101 aatatagcca ggttttgc aaaggtcaccg atgtatttgc cacctgcccgc  
151 cagcagaaag gccacgttt cgaaggcgcc ctatggtcg gggcgccgc  
201 caatgctgcc aacggcgccc tgggtgcaaa catcaatcaa ttgatgacgc  
251 tgcaggatta tctcgccacg gtgattaccc ggcacaggca tattgccggg  
301 ttgattgagc aagctaaatc cgatatcgcc aataatgtgg atggcgctca  
351 acgggagatc gatatcctgg agaatgaccc tagcctggat gctgatgagc  
401 gccataccgc catcaattca ttggtcacgg cgacgcattt ggccaatgtc  
451 agtctggtcg ccgagaccgc tgagcgggtg ctggaaatcca agaattggaa  
501 acctccgaag aacgcactcg aggatttgct tcagcagaag tcgcccac  
551 cccccagacgt gcctaccctg gtcgtgccat ccccgccac accgggcaca  
601 ccgggaaccc cgatcacccccc gggaaaccccg atcacccccc gaaccccaat  
651 cacacccatc ccgggagcgc cgtaactcc gatcacacca acgcccggca  
701 ctcccggtcac gccgggtgacc ccgggcaagc cggtcacccccc ggtgaccccg  
751 gtcaaaccgg gcacaccagg cgagccaaacc ccgatcacgc cggtcacccccc  
801 ccgggtcgcc ccggccacac cgcaacccccc ggccacgccc gttaccccaag  
851 ctcccgctcc acacccgcag ccggctccgg caccggcgcc atcgccctggg  
901 cccccagccgg ttacaccggc cactcccggt ccgtctggtc cagcaacacc  
951 gggcacccca gggggcgagc cgccgcggca cgtcaaacccccc gggcggttgg  
1001 cggagcaacc tgggtgtgccc ggccagcatg cggggggggg gacgcagtcg  
1051 gggcctgccc atgcggacga atccgcgcg tcgggtacgc cggtcgccgc  
1101 gtcccggtgtc ccgggcccac gggcggcggc cgccgcgcg agcggtacccg  
1151 ccgtgggagc gggcgccgt tcgagcgtgg gtacggccgc ggctcgggc  
1201 gcgggggtcgc atgctgccac tggggggggc ccggtgtggcta cctcgaccaa  
1251 ggcggcggca ccgagcacgc gggcggcctc ggccggacg gcacccctcctg  
1301 cccgcccccc gtcgaccgt cacatcgaca aacccgatcg cagcgagtct  
1351 gcagatgacg gtaccccggt gtcgatgatc ccggtgtcg ccgctcgcc  
1401 ggcacgcgac gccgcactcg cagctgcaccccg cgccgcgcg cgtggccgc  
1451 gtgatgcgtc ggggttggcg cgacgcacgc cgccggcgct caacgcgtcc  
1501 gacaacaacg cgggcgacta cgggttcttc tggatcacccg cggtgaccac  
1551 cgacggttcc atcgctgtgg ccaacagcta tgggtggcc tacatacccg  
1601 acgggatgga attgccgaat aagggttact tggccagcgc ggatcacgca  
1651 atcccggttg acgaaattgc acgctgtgcc acctaccccg ttttggccgt  
1701 gcaaggctgg gcccgttcc acgacatgac gctgcggggc gtgatcggt  
1751 ccgcggagca gttggccagt tcggatcccg gtgtggccaa gattgtgctg  
1801 gagccagatg acattccgga gagcggcaaa atgacggggc ggtcgccgct  
1851 ggaggctgtc gaccctctgg cggcggctca gctggccgac actaccgatc  
1901 agcgttgtc cgacttggc ccgcggcgc cgggtggatgt caatccacccg  
1951 ggcgatgagc ggcacatgtc gtgggttcgag ctgatgaagc ccatgaccag  
2001 caccgctacc ggcgcgagg ccgtcatct gccccgttc cgggcctacg  
2051 ctgcccactc acaggagatt gccctgcacc aagcgcacac tgcgactgac  
2101 gccggccgtcc agcgtgtggc cgtcgccgac tggctgtact ggcaatacgt  
2151 caccgggttg ctcgaccggg ccctggccgc cgcatgctga

**FIG. 2E**

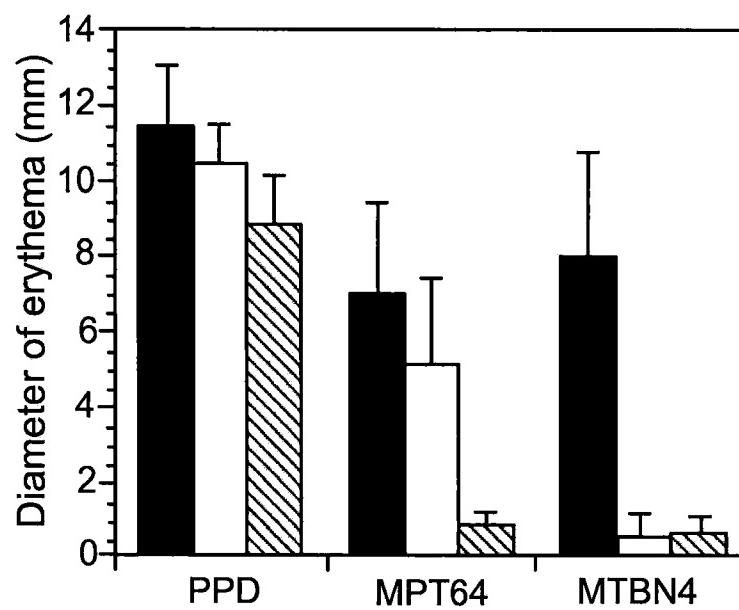


FIG. 3

FIG. 1

MTBN1

MTAEPERVTLREVVLDQLGTAESRAYKMWLPPLTNPVPLNELIARDRRQPLRFALGIMDE  
PRRHLQDVWGVDSAGGNIGGGAPQTGKSTLLQTMVMSAAATHSPRNQFYCIDLGGG  
GLIYLENLPHVGGVANRSEPDVKNRVVAEMQAVMRQRETTKEHRVGSIGMYRQLRDDPS  
QPVASDPYGDVFLIIDGWPGFVGEGFPDLEGQVQDLAAQGLAFGVHVIISTPRWTELKSRV  
RDYLGTKIEFR LGDVNETQIDRITREIPANRPGRAVSMEKHLMIGVPRFDGVHSADNLV  
EA ITAGVTQIASQHTEQAPPVRVLPERIHLHELDPNPPGPESDYRTRWEIPIGLRETDLT  
PAHCHMHTNPPLLIFGAAKSGKTTIAHAIARAI CARNSPQQVRFMLADYRSGLDAVPDT  
HLLGAGAINRNSASLDEAVQALAVNLKKRLPPTDLTTAQLRSRSWWSGFDVVLLVDDWHM  
IVGAAGGMPPMAPLAPLLPAAADIGLHIIVTCQMSQAYKATMDKFVGAAFSGAPTMFLS  
GEKQEFPSSFEKVKRRPPGQAFLVSPDGKEVIQAPYIEPPEEVFAAPPSAG\*

MTBN2

MEKMSHDPIAADIGTQVSDNALHGVTAGSTALTSVTGLVPAGADEVSAQAATAFTSEGIQ  
LLASNASAQDQLHRA GEAVQDVARTYSQIDDGAAGVFAE\*

MTBN3

MLWHAMPELNTARLMAGAGPAPMLAAAAGWQTLSAALDAQAVELTARLNSLGEAWTG  
SDKALAAAATPMVVWLQTA STQAKTRAMQATAQAAAYTQAMATT PSLPEIAANHITQAVLT  
ATNFFGINTIPIALTEMDFIRMWNQAALAMEVYQAETAVNTLF EKLEPMASI LDPGASQ  
STTNPIFGMPSPGSSTPVGQLPPAATQT LGQLGEMSGPMQQLT QPLQQVTSLSQVGGT  
GGNPADEEEAQMGLLGT SPLSNHPLAGGSGPSAGAGL RAE SLPGAGGS LRTPLMSQL  
EKPVAPSVM PAAAAGSSATGGAAPVGAGAMGQGAQSGGSTRPGLVAPAPLAQEREEDDED  
DWDEEDDW\*

MTBN4

MAEMKTDAATLAQEAGNFERISGDLKTQIDQVESTAGSLQGQWRGAAGTAAQAAVVFQE  
AANKQKQELDEISTNIRQAGVQYSRADEEQQQALSSQMGF\*

MTBN5

MAADYDKLFRPHEGMEAPDDMAAQPF DPSASFPPAPASANLPKPNGQT P PPT SDDL SER  
FVSAPP PPPPPP PTPMPIAAGEPPSPEPAASKPPTPPMPIAGPEPAPPKPPTPPMP  
IAGPEPAPPKPPTPPMPIAGPAPPTESQLAPP RPTPQTPTGAPQQPES PAPHVPSHGP  
HQPRRTAPAPPWAKMPIGEPPPAPS RPSASPAEPPTR PAPQHSRRARRGHRYRTDTERNV  
GKVATGPSIQARLRAEEASGAQLAPGTEPSPAPLGQPRSYLAPPTRPAPTEPPPSPSPQR  
NSGRRAERRVHPDLAAQHAAQPD SITAATTGGRRRKRAAPDLDATQKSLRPAAKGPKVK  
KVKPKPKATKPPKVV SQRGWRHWVHALTRINLGLSPDEKYELDLHARVRRNPRGSYQIA  
VVGLKGGA GKTTLA ALGSTLAQVRADRI LALDADPGAGNLADRVGRQSGATIADV LAEK  
ELSHYNDI RAHTSVNAV NLEVLPAPEYSSAQRAL SDADWHFIADPASRFYNLV LADC GAG  
FFDPLTRGV LSTVSGVV VVASV S IDGAQQASVALDWLRNNGYQDLASRACVV INHIMP  
PNAV KDLVRHF EQQVQPG RVV VMPWDRHIAAGTEISLDLLDPIYKRKVLELA AALSDDF  
ERAGRR\*

FIG. 1A

FIG. 1 (continued)

MTBN6

LSAPAVAAGPTAACGATAARPATTRVTILTGRRTDLVLPAAVPMETYIDDTVAVLSEVLE  
DTPADVLGGFDFTAQGVWAFARPGSPPLKLDQSLDDAGVVDGSLLTWSVSRTERYRPLV  
EDVIDAIAVLDESPEFDRTALNRFVGAAIPLLTAPVIGMAMRAWWETGRSLWWPLAIGIL  
GIAVLVGSFVANRFYQSGHLAECLLVTTYLLIATAAALAVPLPRGVNSLGAPOVAGAATA  
VLFLTLMTRGGRKRHELASFAVITAIAVIAAAAAGFYGYQDWVPAGGIAFGLFIVTNAA  
KLTVAVARIALPPIPVPGETVDNEELLDPVATPEATSEETPTWQAIIASVPASAVRLTER  
SKLAKQLLIGYVTSGTLILAAGAIAVVVRGHFFVHSLVVAGLIITVCGFRSRLYAERWCA  
WALLAATVAIPTGLTAKLIIWYPHYAWLSSVYLTVVALVALVVVGSMAHVRRVSPVVKRT  
LELIDGAMIAAIIPMLLWITGVYDTRVNIRF\*

MTBN7

MAEPLAVDPTGLSAAAALKAGLVPQPPAPIAVSGTDSVVAINETMP SIESLVDGLPG  
VKAALTRTASN MAAADVYAKTDQSLGTSLSQYAFGSSGEGLAGVASVGGQPSQATQLLS  
TPVSQVTQLGETAELAPRVVATVPQLVQLAPHAVQMSQN ASPIAQTI SQTAAQQAAQSA  
QGGSGPMPAQLASAEKPATEQAE PVHEVTNDQGDQGDVQPAEVVAAARDEGAGAS PGQQ  
PGGGVPAQAMDTGAGARPAASPLAAPVDPSTPAPSTTTL\*

MTBN8

MSITRPTGSYARQMLDPGGWVEADEDETFYDRAQEYSQVLQRVTDLTCRQQKGHVFEGGLWSGGAANAANGALGANINQLMTLQDYLATVITWHRHIAGLIEQAKSDIGNNDGAQREIDILENDPSLDADERHTAINSLSVTATHGANVSLVAETAERVLESKNWPPKNALEDLLQQKSPPPPDVPTLVVPSPGTPGTPGTIPTPGTPITPGTIPATPAPAPAPAPSPGPCKPVPVTPVKPGTPGEPTPIPVTPVPPVAPATPATPATPVTAPAPAPHPQPAPAPAPSPGPQPVTPATPGPSGPATPGTPGGEPAHVKAALAEQPGVPGQHAGGGTQS GPAHADESAA SVTPAAASGVPGARAAAAPS GTAVGAGARSSVGTAAASGAGSHAATGRAPVATSDKAAAPSTRAASARTAPPARPPSTDHDKPDRSESADDGTPVSMIPVSAARAARDATAAASARQRGRGDALRLARRIAALNASDNNAGDYGFVITAVTTDGSIVVANSYGLAYIPDGMELPNKVYLASADHAI PVDEIARCATYPVLA VQWA AFHDMLRAVIGTAEQLASSDPGVAKIVLEPDDI PESGKMTGRSRLEVVDPSAAAQLADTTDQRLLDLPAPV D VNP PPGDERHMLWFE LMKPMTSTATGREAAHLRAFRAYAAHSQETALHQAH TADAAVQRVAVADWLYWQYVTGLLDRALAAAC\*

FIG. 1B

~~FIG. 2~~

mtbn1

1 atgactgctg aaccggaagt acggacgctg cgcgagggtt tgctggacca  
 51 gctcggaact gctgaatcgc gtgcgtacaa gatgtggctg ccggccgttga  
 101 ccaatccgggt cccgctcaac gagctcatcg cccgtgatcg gcgacaaccc  
 151 ctgcgatttg ccctggggat catggatgaa ccgcgcgcg atctacagga  
 201 tttgtggggc gttagacgttt ccggggccgg cggcaacatc gtttattgggg  
 251 ggcacactca aaccgggaag tcgacgtac tgcagacgt ggtgatgtcg  
 301 gcccggcca cacactcacc ggcgaacgtt cagttctatt gcatcgacct  
 351 aggtggccgc gggctgatct atctcgaaaa cttccacac gtcgggtgggg  
 401 tagccaatcg gtccgagccc gacaaggta accgggtgt cgccagatg  
 451 caagccgtca tgcggcaacg ggaaaccacc ttcaaggaac accgagtg  
 501 ctcgatcggtt atgtaccggc agctgcgtga cgatccaagt caacccgtt  
 551 cgtccgatcc atacggcgac gtcttctga tcacgcacgg atggccccgt  
 601 tttgtcggtt agttccccga ctttgagggg caggttcaag atctggccgc  
 651 ccaggggctg gcgttcggcg tccacgtcat catctccacg ccacgcttgg  
 701 cagagctgaa gtcgcgtgtt cgcgactacc tcggcaccaa gatcgagtt  
 751 cggcttgggt acgtcaatga aaccaggatc gaccggatta cccgcgagat  
 801 cccggcgaat cgtccgggtc gggcagtgtc gatggaaaag caccatctga  
 851 tgatcggtt gcccagggtt gacggcgttc acagcgccga taacctgg  
 901 gaggcgatca ccgggggggt gacgcagatc gttcccgacg acaccgaaca  
 951 ggcacactcg gtgggggtcc tgccggagcg tatccacctg cacgaactcg  
 1001 acccgaaacc cccgggacca gagtcgcact accgcactcg ctgggagatt  
 1051 ccgatcggtt tgcgcgagac ggacctgacg ccggctcact gccacatgca  
 1101 cacgaacccg cacctactga tcttcgggtc ggccaaatcg ggcaagacga  
 1151 ccattgcccc cgcgatcgcg cgccgcattt gtggccggaaa cagtccccag  
 1201 caggtcggtt tcacgcgttc ggactaccgc tcgggcctgc tggacgcgt  
 1251 gcccggacacc catctgtgg ggcggggcg gatcaaccgc aacagcggt  
 1301 cgctagacga ggcgttcaa gcaactgggg tcaacctgaa gaagcggtt  
 1351 cccggaccg acctgacgac ggcgcagcta cgctcggtt cgtgggtgg  
 1401 cggatttgcac gtcgtgtttc tggtcgacga ttggcacatg atcgtgggt  
 1451 cccggggggg gatgccggcg atggcaccgc tggcccggtt attgccccgg  
 1501 gcccggatata tcgggttgca catcattgtc acctgtcaga tgagccagg  
 1551 ttacaaggca accatggaca agttcggtcg cgccgcattt gggtcggt  
 1601 ctccgacaat gttccttgc ggcgagaagc aggaattccc atccagttag  
 1651 ttcaaggta agcggcgccc ccctggccag gcatttctcg tctcgccaga  
 1701 cggcaaagag gtcatccagg cccctacat cgagcctcca gaagaagtgt  
 1751 tcgcagcacc cccaaagcgcc ggttaa

mtbn2

1 atggaaaaaaa tgtcacatga tccgatcgct gcccgcattt gacgcgaatg  
 51 gagcgacaac gctctgcacg ggcgtacggc cggctcgacg ggcgtacgt  
 101 cgggtgaccgg gctgggtccc gccccggccg atgaggtctc cggccaaagcg  
 151 ggcacggcggt tcacatcgga gggcatccaa ttgctggctt ccaatgcac  
 201 ggcggccggc cagtcgcacc gtgcggggcg agcgggtccag gacgtcgccc  
 251 gacacatttc gcaaatcgac gacggcgccg ccggcgctt cggccaaatag

29

mtbn3

1 atgctgtggc acgcaatgcc accggagcta aataccgcac ggctgatggc  
 51 cggcgccgggt ccggctccaa tgcttgcggc ggccgcggga tggcagacgc  
 101 tttcgccggc tctggacgtc caggccgtcg agttgaccgc ggcgttgcac

FIG. 2A

~~FIG. 2~~ (continued)

151 tctctggag aagcctggac tggagggtggc agcgacaagg cgcttgccgc  
201 tgcacgccc atgggtgtct ggctacaaac cgcgtcaaca caggccaaga  
251 cccgtgcgt gcaggcgacg ggcgaagccg cggcatacac ccaggccatg  
301 gccacgacgc cgtcgctgcc ggagatcgcc gccaaccaca tcacccaggc  
351 cgtccttagt ggcaccaact tcttcggtat caacacgatc ccgatcgctg  
401 tgaccgagat ggattatttc atccgtatgt ggaaccaggc agccctggca  
451 atggaggtct accaggccga gaccgggtt aacacgttt tcgagaagct  
501 cgagccgatg gcgtcgatcc ttgatcccg ggcgagccag agcacgacga  
551 acccgatctt cggaatgccc tccccctggca gctcaacacc gttggccag  
601 ttgccgcccgg cggctaccca gaccctcgcc caactgggtg agatgagcgg  
651 cccgatgcag cagatgaccc agccgctgca gcagggtgacg tcgttgtca  
701 gccaggtggg cggcaccggc ggcggcaacc cagccgacga ggaagcccg  
751 cagatgggccc tgctcgac cagtccgctg tcgaaccatc cgctggctgg  
801 tggatcaggc cccagcgcgg ggcggggct gctgcgcgcg gagtcgtac  
851 ctggcgcagg tgggtcggtg accccgcacgc cgctgatgtc tcagctgatc  
901 gaaaagccgg ttgccccctc ggtgatgccc gccgctgctg ccggatcgtc  
951 ggcgacgggt ggcgcgcgc cggtggtgc gggagcgtg gcccagggtg  
1001 cgaatccgg cggctccacc aggccgggtc tggtcgcgc ggcaccgctc  
1051 ggcgaggagc gtgaagaaga cgacgaggac gactgggacg aagaggacga  
1101 ctggta

mtbn4

1 atggcagaga tgaagaccga tgccgctacc ctgcgcagg aggcaggtaa  
51 tttcgagcgg atctccggcg acctgaaaac ccagatcgac caggtggagt  
101 cgacggcagg ttctggcag ggccagttggc gcggcgcggc ggggacggcc  
151 gcccaggccc cgggtggcgc cttccaagaa gcagccaata agcagaagca  
201 ggaactcgac gagatctcga cgaatattcg tcaggccgcgt tcggatact  
251 cgaggccga cgaggagcag cagcaggcgc tggctcgca aatgggcttc  
301 tga

mtbn5

1 atggcggccg actacgacaa gctcttccgg ccgcacgaag gtatggaaac  
51 tccggacgt atggcagcgc agccgttctt cgacccagt gcttcgtttc  
101 cgccggcgc cgcacccgc aacctaccga agcccaacgg ccagactccg  
151 cccccgacgt cgcacgcac gtcggagcgg ttcgtgtcgg ccccgccccc  
201 gccacccccc cccccaccc cgcctccgc aactccgatg ccgatcgccg  
251 caggagagcc gcccctcgccg gaaccggccg catctaaacc acccacacccc  
301 cccatgcccc tcgccccgacc cgaaccggcc ccacccaaac caccacacccc  
351 cccatgccc atcgccggac ccgaaccggc cccacccaaa ccacccacac  
401 ctccgatgcc catcgccgga cctgcaccca ccccaacccga atcccagtgc  
451 ggcggccccc gaccaccgac accacaaacg ccaaccggag cgcgcagca  
501 accggaatca cggcgcccc acgtaccctc gcacgggcca catcaacccc  
551 ggcgcaccgc accaccccg ccctgggcaa agatgccaat cggcgaacccc  
601 cccggccctc cgtccagacc gtctgcgtcc ccggccgaac caccgaccgg  
651 gcctggccccc caacactccc gacgtgcgcg ccggggtcac cgctatcgca  
701 cagacaccga acgaaaacgtc gggaaaggtag caactggtcc atccatccag  
751 ggcggctgc gggcagagga agcatccggc ggcgcagctg ccccgaaac  
801 ggagccctcg ccagcgccgt tgggccaacc gagatcgat ctggctccgc  
851 ccacccgccc cgcgcgcaca gaacctcccc ccagccctc gccgcagcgc  
901 aactccggtc ggcgtgcga ggcgcagcgatc caccggatt tagccgcccc

FIG 2B

FIG. 2 (continued)

951 acatgccgca ggcgaacctg attcaattac ggccgcaacc actggcggtc  
1001 gtcccgca gcggtcagcg ccggatctcg acgcgacaca gaaatccta  
1051 aggccggcgg ccaaggggcc gaaggtgaag aaggtgaagc cccagaaaacc  
1101 gaaggccacg aagccgccc aagtgggtgc gcagcgccgc tggcgacatt  
1151 gggtgcatgc gttgacgcga atcaacctgg gcctgtcacc cgacgagaag  
1201 tacgagctgg acctgcacgc tcgagtcgcg cgcaatcccc gcgggtcgta  
1251 tcagatcgcc gtcgtcggtc tcaaagggtgg ggctggcaaa accacgtga  
1301 cagcagcggtt ggggtcgacg ttggctcagg tgccggccga ccggatcctg  
1351 gctctagacg cggatccagg cgccggaaac ctgcggatc gggtagggcg  
1401 acaatcgggc ggcgaccatcg ctgatgtgct tgcagaaaaa gagctgtcgc  
1451 actacaacga catccgcgc cacactagcg tcaatcggtt caatctggaa  
1501 gtgctgcccgg caccggaaata cagctcgccg cagcgccgc tcagcgacgc  
1551 cgactggcat ttcatcgccg atcctgcgtc gaggtttac aacctcgct  
1601 tggctgattt tggggccggc ttcttcgacc cgctgaccgg cggcgtgt  
1651 tccacgggtt ccggtgtcggt ggtcgtggca agtgtotcaa tcgacggcgc  
1701 acaacaggcg tcggtcgcgt tggactggtt ggcgcaacaac gtttaccaag  
1751 atttggcgag ccgcgcatgc gtggcatca atcacatcat gccgggagaaa  
1801 cccaatgtcg cagttaaaga cctggtgccgg catttgcac agcaagttca  
1851 acccgccgg gtcgtgtca tgccgtggga caggcacatt gcggccggaa  
1901 ccgagatttca actcgacttg ctgcaccata tctacaagcg caaggtcctc  
1951 gaattggccg cagcgctatc cgacgatttc gagagggctg gacgtcggt  
2001 a

mtbn6

1 ttgagcgcac ctgctgttgc tgctggtcct accggccggg gggcaaccgc  
51 tgcgcggcct gccaccaccc ggggtgacgt cctgaccggc agacggatga  
101 ccgatttggt actgccagcg ggggtgcccga tggaaactta tattgacgac  
151 accgtcgccg tgctttccga ggtgttggaa gacacgcccgg ctgatgtact  
201 cggcggtttc gactttaccg cgcaaggcgt gtggcggtt gctcgcccc  
251 gatcgccgccc gctgaagctc gaccagtac tcgatgacgc cgggggtggc  
301 gacgggtcac tgctgactct ggtgtcagtc agtgcacccg agcgctaccc  
351 accgttgggtc gaggatgtca tcgacgcgt cggcgtgctt gacgagtcac  
401 ctgagttcga ccgcacggca ttgaatcgct ttgtggggc ggcgatcccg  
451 ctttgaccg cgcccgcatc cgggatggcg atgcgggcgt ggtggaaac  
501 tggcgttagc ttgtgggtggc cggtggcgat tggcatcctg gggatcgctg  
551 tgctggtagg cagcttcgtc gcgaaacaggt tctaccagag cggccacact  
601 gccgagtgcc tactggtcac gacgtatctg ctgatcgcaa ccgcccgcagc  
651 gctggccgtg ccgttgcgcg ggggggtcaaa ctgttttttgggggggg  
701 ttggccggcgc cgctacggcc gtgttttttgggggggggggggggggg  
751 ggcctcgga agcgcatga gttggcgctg tttggcgatc taccgctat  
801 cgcggtcattc gcgccgcgg ctgccttcgg ctatggatac caggactgg  
851 tccccgggg ggggatcgca ttggggctgt tcattgtgac gaatcgcc  
901 aagctgaccg tcgcggtcgc gcgatcgcg ctgcggccga ttccggatt  
951 cggcgaaacc gtggacaacg aggagttgtc cgatcccgatc gcgaccccg  
1001 aggctaccag cgaagaaaacc cgcacccgtgc aggccatcat cgcgtcggt  
1051 ccccggtccg cgggtccggct caccggatcgcc agcaaaactgg ccaagcaact  
1101 tctgatcgga tacgtcacgt cgggcacccct gattctggat gccgggtgcca  
1151 tcgcggtcgt ggtgcggggg cacttttttgc tacacagcct ggtggcgcc  
1201 ggtttgatca cgaccgtctg cggatttcgc tcgcggctt acgcccggcg  
1251 ctgggtgtcg tggcggttgc tggcgccgac ggtcgccatt ccgacgggtc  
1301 tgacggccaa actcatcatc tggttaccgc actatgcctg gctgttgg

FIG. 2C

FIG. 2 (continued)

1351 agcgtctacc tcacggtagc cctgggtgcg ctcgtggtgg tcgggtcgat  
1401 ggctcacgtc cggcgcggtt caccgggtcgaaaacgaact ctggaattga  
1451 tcgacggcgc catgatcgct gccatcattc ccatgctgct gtggatcacc  
1501 ggggtgtacg acacggtccg caatatccgg ttctga

mtbn7

1 atggctgaac cggtggccgt cgatcccacc ggcttgagcg cagcggccgc  
51 gaaattggcc ggctcggtt ttccgcagcc tccggcccg atcgccgtca  
101 gcggAACGGA ttccgggtta gcagcaatca acgagaccat gccaagcata  
151 gaatcgctgg tcagtgcgg gctgccccgc gtgaaagccg ccctgactcg  
201 aacagcatcc aacatgaacg cggcgccgga cgtctatgcg aagaccgatc  
251 agtcaactggg aaccaggttt agccagttatg cattcggttc gtcggcgaa  
301 ggccctggctg gcgtgcctc ggtcggttgt cagccaagtc aggctaccca  
351 gctgctgagc acacccgtgt cacaggtcac gacccagctc ggcgagacgg  
401 ccgctgagct ggcacccctgt gttgtgcga cggtgccgca actcggttcag  
451 ctggctccgc acggcgttca gatgtcgcaa aacgcataccc ccatacgctca  
501 gacgatcagt caaacggccc aacaggccgc ccagagcgcg cagggcgca  
551 gcggcccaat gcccgcacag cttgccagcg ctgaaaaacc ggccaccgag  
601 caagcgagc cggtccacga agtgacaaac gacgatcagg gcgaccagg  
651 cgacgtgcag cggcccgagg tcgttgcgc ggcacgtgac gaaggcgccg  
701 ggcgcattcacc gggccagcag cccggcgggg gcgttcccgc gcaagccatg  
751 gataccggag cgggtgccccg cccagcgccg agtccgctgg cggccccgt  
801 cgatccgtcg actccggcac cctcaacaac cacaacgttg tag

mtbn8

1 atgagtatta ccaggccgac gggcagctat gccagacaga tgctggatcc  
51 gggcggctgg gtggaaagccg atgaagacac tttctatgac cgggcccagg  
101 aatatacgcca gttttgcaaa agggtcaccg atgtatttggc cacctgcccgc  
151 cagcagaaag gccacgttcc cgaaggccgc ctatggtccg gcgccgcccgc  
201 caatgctgcc aacggcgccc tgggtgcaaa catcaatcaa ttgatgacgc  
251 tgcaggattt tctgcacgcgt gtgattacct ggcacaggca tattgccggg  
301 ttgattgagc aagctaaatc cgatatcgcc aataatgtgg atggcgctca  
351 acgggagatc gatatcctgg agaatgaccc tagcctggat gctgatgagc  
401 gccataccgc catcaattca ttggtcacgg cgacgcattgg gccaaatgtc  
451 agtctggtcg ccgagaccgc tgagcgggtg ctggaatcca agaattggaa  
501 acctccgaag aacgcactcg aggatttgc tcagcagaag tcgcccac  
551 ccccagacgt gcctaccctg gtcgtccat ccccgccac accgggcaca  
601 cgggaacccc cgatcaccccc gggaaaccccg atcaccggg gaaccccaat  
651 cacaccatc cccggagcgc cggtaactcc gatcacacca acgcccggca  
701 ctcccggtcac gccgggtgacc cccggcaagc cggtaaccgg ggtgaccccg  
751 gtcaaaacgg gcacaccagg cgagccaaacc cggatcaccgc cggtaaccgg  
801 cccggctgccc cccggccacac cggcaacccccc ggccacgccc gttaccccg  
851 ctcccggtcc acacccgcag cccggctccgg caccggcgcc atcgccctggg  
901 ccccagccgg ttacaccggc cactcccggt cccgtctggc cagcaacacc  
951 gggcaccccc gggggcgagc cggcgccgca cgtcaaaaccc gcgccgttgg  
1001 cggagcaacc tgggtgcgcg ggccagcatg cgggcggggg gacgcagtgc  
1051 gggcctgccc atgcggacga atccggccgcg tcgggtgacgc cggctgcggc  
1101 gtccgggtgtc cccggcgacac gggcggcgccg cggccgcgcg agcggtaaccg  
1151 cccgtggagc gggcgcgcgt tcgagcgtgg gtacggccgc ggcctcgccg  
1201 cccgggtgcgc atgcgtccac tggggcgccg cccggtggtca cctcgacaa

FIG. 2D

FIG. 2 (continued)

1251 ggcggcggca ccgagcacgc gggcgccctc ggccggacg gcacctcctg  
1301 cccgcccggcc gtcgaccgat cacatcgaca aacccgatcg cagcgagtct  
1351 gcagatgacg gtacgccggt gtcgatgatc cccgtgtcgg cggctcgccc  
1401 ggcacgcgac gccgccaactg cagctgccag cgccccccag cgtggcccg  
1451 gtgatgcgcgt gcggttggcg cgacgcatacg cggcggcgct caacgcgtcc  
1501 gacaacaacg cggggacta cgggttcttc tggatcacccg cggtgaccac  
1551 cgacggttcc atcgctgtgg ccaacagcta tgggctggcc tacatacccg  
1601 acgggatgga attgccgaat aagggtgtact tggccagcgc ggatcacgca  
1651 atcccggtt acgaaaattgc acgctgtgcc acctaccggg ttttggccgt  
1701 gcaaggcctgg gcggcttcc acgacatgac gctgcggcg gtgatcggt  
1751 ccgcggagca gttggccagt tcggatcccg gtgtggccaa gattgtgctg  
1801 gagccagatg acattccgga gagcggcaaa atgacgggccc ggtcgccgct  
1851 ggaggtcgta gaccctcggt cggcggctca gctggccgac actaccgatc  
1901 agcggttgcgacttgcgtt ccgcggcgcc cgggtggatgt caatccaccg  
1951 ggcgatgagc ggcacatgct gtggttcgag ctgatgaagc ccatgaccag  
2001 caccgctacc ggcccgagg ccgcctcatct gcggggcttc cgggcctacg  
2051 ctgcccactc acaggagatt gccctgcacc aagcgcacac tgcgactgac  
2101 gcggccgtcc agcgtgtggc cgtcgccgac tggctgtact ggcaatacgt  
2151 caccgggttgcgttccgcaccggg ccctggccgc cgcacatgctga

FIG. 2E

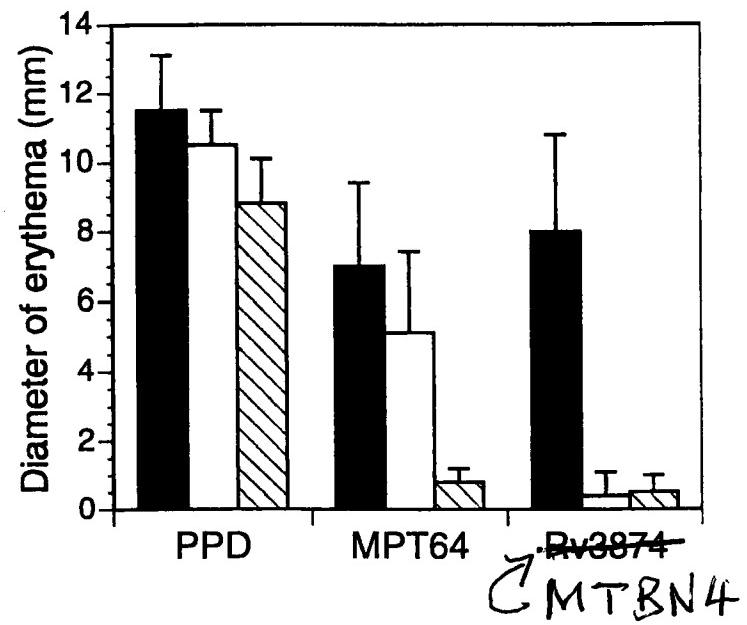


FIG 3